

General information

When working on vehicles provided with an ABS anti-locking brake system, proceed as follows:

Welding jobs

When welding with an electric welding unit, pull plug from electronic control unit.

Paintwork

During painting jobs, the electronic control unit may be loaded for short periods up to max. 95 °C/203 °F and for long periods (approx. 2 hours) up to max. 85 °C/185 °F.

Installation of battery

If the battery has been removed, tighten cable terminals on both connections again well upon reinstallation.

Rear axle center piece

When exchanging or replacing a rear axle center piece or during a reconditioning job make sure that the correct toothed wheel with the correct ratio for speed sensor is installed.

If a wheel with the wrong number of teeth is installed, this fault will not be found when checking the system with an ABS tester. The stopping distance, however, will be extended during controlled braking.

Function test

Following all jobs on brake system during which no direct components of ABS were involved, a simple operational checkup will be sufficient. This means that with the engine running and the ABS intact the yellow warning lamp in instrument cluster should go out and no longer light up after exceeding a speed of 5–7 km/h.

Such jobs include for example exchange or replacement of calipers, brake linings, brake hoses, brake disks, brake booster, tandem main cylinder, brake cable controls and components of parking brake, as well as the two brake lines on rear axle.

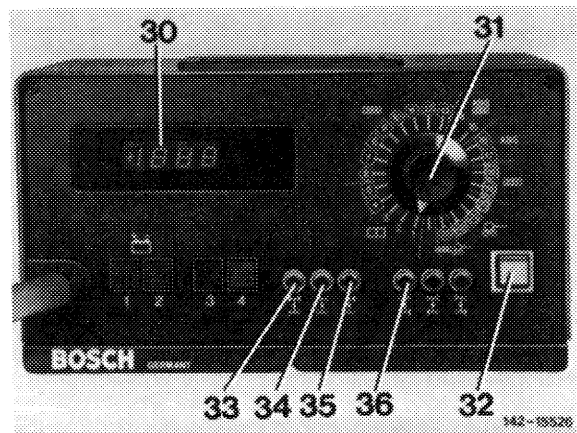
If the work includes the hydraulic unit, the electronic control unit, the speed sensors, the harness, or if units are exchanged, e.g. during repairs following an accident, the entire ABS must be checked with the available Bosch tester in combination with a brake test bench, or with an adapter together with a multimeter.

Handling of ABS components of vehicles following an accident

Parts with no visible damage need not be replaced. An exchange of the hydraulic unit, for example, is only required whenever the cover of the solenoid valves or electric lines are damaged.

Bosch tester

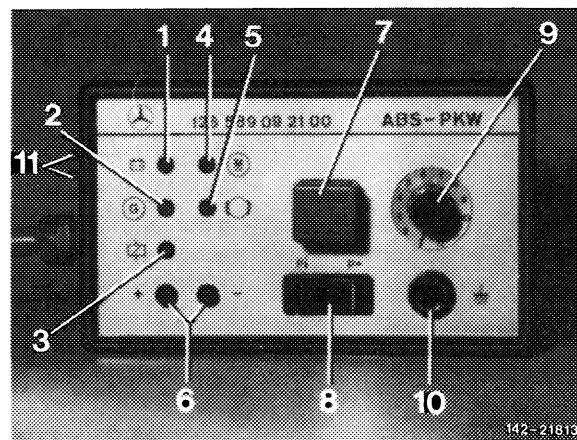
- 1 Green light (battery voltage)
- 2 Red light (battery voltage)
- 3 Green light
- 4 Red light
- 30 Digital readout
- 31 Program switch
- 32 Yellow light button
- 33 Pushbutton front wheel brake
- 34 Pushbutton front wheel brake left
- 35 Pushbutton front wheel brake right
- 36 Pushbutton rear wheel brake



Adapter

- 1 LED battery voltage
- 2 LED alternator
- 3 LED solenoid valve
- 4 LED return pump
- 5 Stop lamp
- 6 Connecting jacks for measuring instrument
- 7 Overvoltage protection
- 8 Rocker switch for reducing or holding pressure
- 9 Program switch
- 10 Ground connection button
- 11 Automatic cutout

LED = Light-Emitting-Diodes

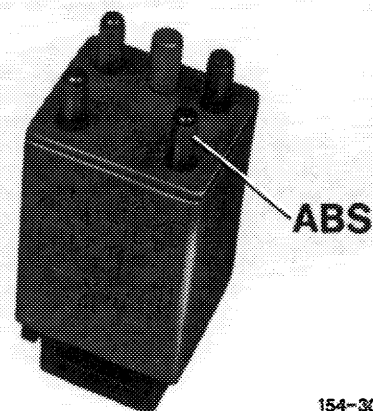


Note

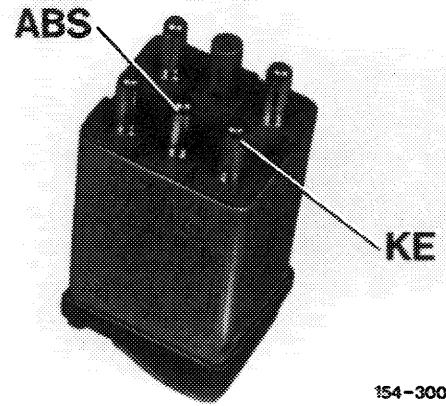
A modified overvoltage protection for electronic control unit is installed since September 1985. The modified overvoltage protection is provided with an additional pin 87 for CIS-E injection system.

The overvoltage protection has 7 pins since September 1986.

Version without CIS-E injection system up to August 1985 (4 pins)

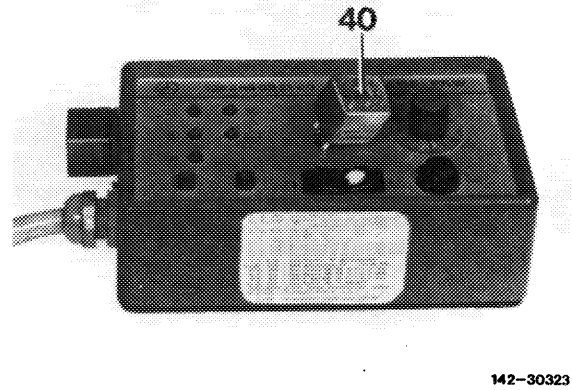


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Version with CIS-E injection system
starting September 1985 (5 pins)

The overvoltage protection with 5 pins can be tested with the ABS tester together with the protective adapter (40) part No. 126 589 15 63 00. In addition, make sure that the version of the overvoltage protection installed in vehicle is also plugged into tester. The different versions cannot be interchanged with each other.



Example:
Protective adapter (40)
installed in DB adapter